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Musineon of Rafinesque.

JOHN M. COULTER AND J. N. ROSE.

In studying some recent Mexican collections of *Umbelliferæ* we were led to an investigation of the genus commonly known as *Musenium* of Nuttall by the discovery of what seems to be a Mexican representative of it. The Nuttallian genus of 1840 had been replaced by Rafinesque's *Adorium* of 1825 in Kuntze's *Revisio*, and this name appears in the recent "Check list" published under the auspices of the Botanical Club. As the validity of this substitution must rest upon a thorough examination of Rafinesque's writings, advantage was taken of the unusual facilities offered by the various libraries at Washington to examine into the matter. The result is stated in the following history:

In 1819, in *Journal de Physique, de Chimie et d'Histoire Naturelle* (89: 101), Rafinesque established the genus *Marathrum*, basing it upon *Seseli divaricatum* Pursh.

In 1820, in the same journal (91: 71), having discovered a previously described *Marathrum* Humb. & Bonp. (1808), he substituted *Musineon* for his *Marathrum*, and as this publication seems to have escaped the notice of recent bibliographers, Rafinesque's statement is quoted in full as follows:

1. Dans le prodrome de 50 nouveaux genres de plantes d'Amérique, j'ai décrit deux nouveaux genres sous les noms de *marathrum* et de *pythagorea*; je me suis aperçu depuis lors, que ces noms avaient déjà été employés, le premier par Robert Brown, et le second par Loureiro; et comme je suis convaincu de l'importance et de la nécessité d'éviter des doubles emplois en Botanique, je m'empresse de rectifier cette erreur, et de proposer les noms suivans en place.

Mon G.¹ *marathrum* devra se nommer *musineon*. Ces deux noms sont des synonymes de fenouil.

In 1825 Rafinesque suggested still another name, *Adorium*, which was taken up by Dr. Otto Kuntze as the oldest tenable name, who states that the *Musineon* Raf., referred to in De-Candolle's *Prodromus* (4: 146), must be an error. Dr. Kuntze certainly did not find it in the place cited in the *Revisio*, for it is the citation of *Marathrum*.

¹With Rafinesque the abbreviation "G" stands for genus.

In 1840, among Nuttall's manuscript genera, Torrey and Gray published *Musenium*, which was evidently simply a Latinizing of Rafinesque's *Musineon*, with which Nuttall was certainly familiar.

It seems clear, therefore, that the generic name *Musenium* must stand, but that it is not Nuttall's, and should retain the form *Musineon* originally published by Rafinesque.

Our present understanding of the genus and its species is as follows:

MUSINEON Raf. Jour. Phys. **91**: 71. 1820.

Marathrum Raf. Jour. Phys. 89: 101. 1819. not H. & B. 1808.

Adorium Raf. Neogenyt. 3. 1825.

Musenium Nutt. Torr. & Gray, Fl. 1: 642. 1840.

**Calyx-teeth prominent: carpophore entire*.—Rocky Mts. and plains to the eastward from Colorado northward.

← *Stems dichotomously branching from the base: leaf-segments toothed.*

++ *Stems glabrous: fruit smooth, about 4^{mm} long.*

1. MUSINEON DIVARICATUM (Pursh.) Raf. Journ. Phys. **91**: 71. 1820.

Seseli lucidum Nutt. Fras. Cat. (1813), name only.

Seseli divaricatum Pursh. Fl. 723. 1814.

Marathrum divaricatum Raf. Journ. Phys. 89: 101. 1819.

Adorium crassifolium Raf. Neogenyt. 3. 1825.

Adorium lucidum Kuntze, Rev. Gen. Pl. 264, 1891, name only.

Adorium divaricatum Rydberg, Bot. Surv. Nebr. 3: 37. 1894.

++ ++ *Stems scabrous: fruit scabrous, shorter and broader than in the former.*

2. MUSINEON HOOKERI (Nutt.) Torr. & Gray, Fl. **1**: 642. 1840.

M. divaricatum Hookeri T. & G. l. c.

M. trachyspermum Nutt. l. c.

M. angustifolium Nutt. l. c.

← + *Acaulescent, the simple peduncles much exceeding the leaves: leaf-segments narrowly linear and entire.*

3. MUSINEON TENUIFOLIUM (Nutt.) Torr. & Gray, Fl. **1**: 642. 1840.

Adorium tenuifolium Kuntze, Rev. Gen. Pl. 264. 1891.

** *Calyx-teeth obsolete: carpophore two-parted.*—High mountains of southern Mexico.

4. ***Musineon alpinum*, n. sp.**—Acaulescent, in dense mats, from a thick branching caudex, 5 to 10^{cm} high, glabrous throughout, or nearly so: leaves once to twice pinnate, somewhat shorter than the peduncles, the primary segments ovate and more or less lobed or pinnately parted, and usually with a pubescent ring on the rhachis at the junction: peduncles thick, bearing a few-flowered 4- to 6-rayed umbel, with no involucre and involucels of few linear bractlets longer than pedicels: rays unequal, 6 to 12^{mm} long: pedicels 2 to 4^{mm} long: flowers not seen: fruit glabrous, oblong-ovate, with notched base and blunt apex, 3^{mm} long, with filiform ribs and long, flat (strap-shaped) styles.—Cold summit slopes, Nevada de Toluca, state of Mexico, alt. 14,000^{ft}, September 2, 1892, *Pringle's* no. 4,247 of 1892.

This species is referred to *Musineon*, although it is widely separated geographically from the other species, which belong to the northern plains region. Its habit and general characters are those of the genus as already known, but the obsolete calyx-teeth, two-parted carpophore, and peculiar styles, as well as the wide geographic separation, suggest a possible generic separation if supported by further Mexican material. The fact that it occupies the high mountain region of Central Mexico makes its claim to be congeneric with the northern forms more reasonable.

Lake Forest and Washington.